

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 1-4 and 6-16 are now pending in this application.

Applicant wishes to thank the Examiner for carefully examining the present application, particularly in view of the problem with the content of the PTO's file, as discussed below.

Specification/Drawings

The abstract, specification and drawings are objected to because the abstract, specification, and drawings filed with the present application are not those of the priority document cited on the oath of PCT/EP03/50691. It is respectfully submitted that Applicant has received a Notice Informing the Applicant of the Communication of the International Application to the Designated Offices (form PCT/IB/308) and has filed a Transmittal Letter to the United States Designated/Elected Office (DO/EO/USS) Concerning a Filing Under 35 U.S.C. 371 (form PTO-390), at the time of entering the U.S. National stage. Both forms indicate the correct international application number of PCT/EP2003/050691. It is respectfully submitted that no further action is necessary by the Applicant because Applicant has submitted all the proper forms to identify the international application. Accordingly, it is respectfully submitted that the clerical error should be addressed by the PTO so as to match the international application with the proper file.

Rejection of claims 3-4 and 10 based on 35 U.S.C. 112

Claims 3-4 and 10 are rejected under 35 U.S.C. 112, second paragraph as being indefinite. These claims have been amended to address this rejection. For at least this reason, favorable reconsideration of the rejection is respectfully requested.

Rejection of claims 1-9, 11-12, and 14-15 based on Morimoto

Claims 1-9, 11-12, and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent 4,729,871 ("Morimoto"). For at least the following reasons, this rejection is traversed.

Claim 1 has been amended to incorporate the features of claim 5 such that claim 1 recites "said first layer comprising a porous metal layer comprising a non-woven metal fiber

fleece comprising long metal fibers.” Morimoto does not teach or suggest this feature. Morimoto merely describes a process for preparing a porous metal plate by applying an adhesive on a substrate, embedding short metal fibers in said adhesive to form a composite, applying pressure to the composite, and sintering the composite. Morimoto does not teach or described a non-woven metal fiber fleece comprising long metal fibers. Thus, Morimoto does not teach or suggest all the features of claim 1.

In addition, the invention of claim 1 is fundamentally different from Morimoto as the present invention relates to a layered filter structure comprising a first layer comprising a porous metal layer of long metal fibers and a second layer comprising a self-supporting layer of sintered short metal fibers, wherein the first layer and the second layer are sintered together. An important feature of claim 1 is that the layer comprising the short metal fibers is a self-supporting layer. A self-supporting layer is a layer that can be handled as such; for example, it can be transported. (See description, page 2, lines 8-10 of the written description.) Obtaining a self-supporting layer of short metal fibers is not obvious for a person skilled in the art because obtaining a self-supporting layer of short metal fibers is more complex than the known process of obtaining a layer of short metal fibers by applying an adhesive on a substrate and by embedding short metal fibers in this adhesive, as is described, for example, in Morimoto.

Furthermore, the combination of the layers as specified in the invention of claim 1 has the advantage in that it can function well as a surface filtration medium. The second layer comprising the short metal fibers (= the top layer of the filtration medium) has a lot of pores resulting in a high porosity. As the pores are small, the particles are captured at the surface of the filter medium and do not penetrate in the pores. (See page 4, lines 28-30 of the written description.)

Accordingly, claim 1 is not anticipated or rendered unpatentable over Morimoto.

Claim 2-4, 6-12, and 14-16 depends from and contains all the features of claim 1, and are allowable for the same reasons as claim 1, without regard to the further patentable features contained therein. However, it is pointed out that Morimoto does not teach or suggest all the features of claim 2, which recites a specified maximum roughness depth. The PTO asserts that such a maximum roughness depth is inherent or is obvious. As to the inherency assertion, the MPEP 2163.07(a) states that:

“To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

The PTO has not provided any evidence that the teachings provided by Morimoto necessarily have the recited maximum roughness depth. Indeed, the PTO merely gives a conclusionary statement with not support at all. Thus, the PTO has not established inherency. As to the obvious assertion, the MPEP 2143 states that:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

In the present case, the PTO had not provided any prior reference that teaches or suggests the recited maximum roughness depth, which makes the rejection improper. Accordingly, claim 2 is not rendered anticipated or unpatentable over Morimoto.

Claim 13 recites a method of manufacturing a layered filter, which comprises “providing a first layer, said first layer comprising a porous metal layer; providing a second layer, said second layer comprising a self-supporting layer of short metal fibers which are sintered together; bringing said first layer and said second layer in contact with each other to form a layered structure; and sintering said layered structure.” Morimoto does not teach or suggest this combination of steps. Morimoto merely describes a process for preparing a porous metal plate by applying an adhesive on a substrate, embedding short metal fibers in said adhesive to form a composite, applying pressure to the composite, and sintering the composite. The PTO concedes that Morimoto is silent to the limitation that the second layer containing short metal fibers which is self-supporting and sintered together is supplied with a first porous metal layer and subsequently sintered together. However, the PTO improperly asserts that

it would have been within the purview of one of ordinary skill in the art...to have recognized that the multilayer composite structures of Morimoto could be formed by [a] wide variety [of] processes including forming a sintered layer containing the short metal fibers prior to joining to another layer with a reasonable expectation of success. Absent a teaching of the criticality or

showing of unexpected results from the layered filter structure being joined in the claimed sequence, it would not provide a patentable distinction over the prior art” (Page 6 of the Office Action.)

This rejection is improper because there has been no teaching in Morimoto or in the prior art for such an assertion. MPEP 2143 (provided above) requires that all features be disclosed in the prior art references, and the PTO has not provided any prior art reference to support for the assertion that the second layer is sintered and self-supporting before sintering the second layer to the first layer. In addition, the PTO seems to improperly shift the burden to Applicant by asserting that Applicant must show a teaching of the criticality or showing of unexpected results for the multi-sintering process. This assertion is typically used after the PTO has determined that a particular variable is a results-effective variable that can be optimized.¹ However, in this case, the PTO has not establishing that the multi-sintering process is a results-effective variable; thus one with ordinary skill in the art would not have been motivated to optimize such a process. Accordingly, claim 13 is not rendered unpatentable over the prior art.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claim 10 based on Morimoto and Nakagawa

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto in view of U.S. Patent 4,703,898 (“Nakagawa”). Claim 10 depends from and contains all the features of claim 1. As previously mentioned, Morimoto does not teach or suggest all the features of claim 1. Nakagawa does not cure these deficiencies. For at least this reason, claim 10 is allowable without regard to the further patentable features contained therein.

Allowability of claim 16

Claim 16 depends from and contains all the features of claim 1, and is allowable for at least the same reasons as claim 1, without regard to the further patentable features contained therein. For at least this reasons, allowance of claim 16 is respectfully requested.

¹ A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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